

Application No.: 10/621,892
Docket No.: SO0008US

Page 4

Amendments to Claims

- Ok to enter*
- Planck 1/25/04*
1. (Original) A poly(trimethylene-ethylene ether) glycol.
 2. (Original) The poly(trimethylene-ethylene ether) glycol as claimed in claim 1, prepared by the polycondensation of 1,3-propanediol reactant and ethylene glycol reactant.
 3. (Original) The poly(trimethylene-ethylene ether) glycol as claimed in claim 2, wherein the polycondensation is carried out with an acid polycondensation catalyst.
 4. (Original) The poly(trimethylene-ethylene ether) glycol as in claim 3, wherein the polycondensation catalyst is homogeneous.
 5. (Original) The poly(trimethylene-ethylene ether) glycol as in claim 4, wherein the polycondensation catalyst comprises sulfuric acid.
 6. (Original) The poly(trimethylene-ethylene ether) glycol as claimed in claim 1, prepared by acid catalyzed polycondensation of 1,3-propanediol and ethylene glycol.
 7. (Original) The poly(trimethylene-ethylene ether) glycol as claimed in claim 5, prepared by acid catalyzed polycondensation of 1,3-propanediol and ethylene glycol.
 8. (Original) The poly(trimethylene-ethylene ether) glycol as claimed in claim 1, prepared by acid catalyzed polycondensation of about 50 to about 99 mole % 1,3-propanediol and about 50 to about 1 mole % ethylene glycol.
 9. (Original) The poly(trimethylene-ethylene ether) glycol as claimed in claim 1, prepared by acid catalyzed polycondensation of about 60 to about 98 mole % 1,3-propanediol and about 40 to about 2 mole % ethylene glycol.

Application No.: 10/621,892

Docket No.: SO0008US

Page 5

10. (Original) The poly(trimethylene-ethylene ether) glycol as claimed in claim 1, prepared by acid catalyzed polycondensation of about 70 to about 98 mole % 1,3-propanediol and about 30 to about 2 mole % ethylene glycol.

11. (Original) The poly(trimethylene-ethylene ether) glycol of claim 2, wherein the 1,3-propanediol reactant is selected from the group consisting of 1,3-propanediol, and oligomers of 1,3-propanediol having a degree of polymerization of 2 to 3, and mixtures thereof.

12. (Original) The poly(trimethylene-ethylene ether) glycol of claim 7, wherein the 1,3-propanediol reactant is selected from the group consisting of 1,3-propanediol, and oligomers of 1,3-propanediol having a degree of polymerization of 2 to 3, and mixtures thereof.

13. (Original) The poly(trimethylene-ethylene ether) glycol of claim 2, wherein the ethylene glycol reactant is selected from the group consisting of ethylene glycol, and oligomers of ethylene glycol having a degree of polymerization of 3 to 4, and mixtures thereof.

14. (Currently Amended) The poly(trimethylene-ethylene ether) glycol of claim 3 [2], wherein the ethylene glycol reactant is selected from the group consisting of ethylene glycol, and oligomers of ethylene glycol having a degree of polymerization of 3 to 4, and mixtures thereof.

15. (Original) The poly(trimethylene-ethylene ether) glycol of claim 11, wherein the ethylene glycol reactant is selected from the group consisting of ethylene glycol, and oligomers of ethylene glycol having a degree of polymerization of 3 to 4, and mixtures thereof.

16. (Original) The poly(trimethylene-ethylene ether) glycol of claim 2, wherein the 1,3-propanediol reactant is 1,3-propanediol.

Application No.: 10/621,892
Docket No.: SO0008US

Page 6

17. (Currently Amended) The poly(trimethylene-ethylene ether) glycol of claim 16, wherein the 1,3-propanediol is derived from either a petrochemical or a renewable source.

18. (Original) The poly(trimethylene-ethylene ether) glycol of claim 2, wherein the ethylene glycol reactant is ethylene glycol.

19. (Original) The poly(trimethylene-ethylene ether) glycol of claim 16, wherein the ethylene glycol reactant is ethylene glycol.

20. (Original) The poly(trimethylene-ethylene ether) glycol of claim 1, having a number average molecular weight (Mn) of 250 to about 10,000.

21. (Currently Amended) The poly(trimethylene-ethylene ether) glycol of claim 1, having a number average molecular weight (Mn) of [at least] about 1,000 to about 5,000.

22. (Currently Amended) A poly(trimethylene-ethylene ether) glycol as claimed in claim 1, prepared by a process comprising the steps of:

(a) providing (1) 1,3-propanediol reactant, (2) ethylene glycol reactant and (3) [and] acid polycondensation catalyst; and

(b) polycondensing the 1,3-propanediol and ethylene glycol reactants in the presence of the acid polycondensation catalyst to form poly(trimethylene-ethylene ether) glycol.

23. (Original) A poly(trimethylene-ethylene ether) glycol as claimed in claim 1, prepared by a continuous process comprising:

(a) continuously providing (i) 1,3-propanediol reactant, (ii) ethylene glycol reactant and (iii) acid polycondensation catalyst; and

(b) continuously polycondensing the 1,3-propanediol and ethylene glycol reactants in the presence of the acid polycondensation catalyst to form poly(trimethylene-ethylene ether) glycol.

Application No.: 10/621,892
Docket No.: SO0008US

Page 7

24. (Original) A poly(trimethylene-ethylene ether) glycol as claimed in claim 1, prepared by a semi-continuous process comprising the steps of:

- (a) batch polycondensing 1,3-propanediol reactant in the presence of acid polycondensation catalyst; and
- (b) adding ethylene glycol reactant to the batch polycondensing over time.

25. (Currently Amended) A process comprising:

- (a) providing (1) 1,3-propanediol reactant, (2) ethylene glycol reactant and (3) [and] acid polycondensation catalyst; and
- (b) polycondensing the 1,3-propanediol and ethylene glycol reactants in the presence of the acid polycondensation catalyst to form poly(trimethylene-ethylene ether) glycol.

26. (Original) A process comprising:

- (a) continuously providing (i) 1,3-propanediol reactant, (ii) ethylene glycol reactant and (iii) acid polycondensation catalyst; and
- (b) continuously polycondensing the 1,3-propanediol and ethylene glycol reactants in the presence of the acid polycondensation catalyst to form poly(trimethylene-ethylene ether) glycol.

27. (Original) A process comprising:

- (a) batch polycondensing 1,3-propanediol reactant in the presence of acid polycondensation catalyst; and
- (b) adding ethylene glycol reactant to the batch polycondensing over time.

28. (Original) A composition comprising poly(trimethylene-ethylene ether) glycol and additive.

29. (Currently Amended) The composition of claim 28, wherein the additive comprises [at least one each of] at least one of delustrant, colorant, stabilizer, filler, flame retardant, pigment, antimicrobial agent, antistatic agent, optical brightener, extender, processing aid, viscosity booster and mixtures thereof.

Application No.: 10/621,892
Docket No.: SO0008US

Page 8

30. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 1, used in at least one of breathable membranes, synthetic lubricants, hydraulic fluids, cutting oils, motor oils, surfactants, spin-finishes, water-borne coatings, laminates, adhesives, packaging, films and foams, fibers and fabrics.

31. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 1, which is a block copolymer of polyethylene oxide and polytrimethylene oxide.

32. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 31, having a molecular weight of at least about 1,000.

33. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 31, having a molecular weight of at least about 5,000.

34. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 31, having a molecular weight of up to about 20,000.

35. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 32, having a molecular weight of up to about 20,000.

36. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim [34] 35, having a molecular weight up to about 10,000.

37. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 31, wherein the weight % of polyethylene glycol is at least about 10%, based on the total amount of polyethylene glycol and polytrimethylene glycol.

Application No.: 10/621,892
Docket No.: SO0008US

Page 9

38. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 37, wherein the weight % of polyethylene glycol is up to about 70%, based on the total amount of polyethylene glycol and polytrimethylene glycol.

39. (Currently Amended) The poly(trimethylene-ethylene ether) glycol [composition] of claim 31, used in at least one of breathable membranes, lubricants, surfactants, spin-finishes, water-borne coatings, laminates, adhesives, packaging, films and foams.